Outline Oct 31:

• Quiz review: Handout 7 (stacks)
• Quiz review: using the “in” operator
• List-of-Lists (LOLs)
• TDD graphics example
• Mid-semester feedback

Notes

• Lab 7 due **Saturday** night (email me when you finish TDD!)
• Quiz 3 on Friday! Ninja session tonight 7-10pm (in this room)
• Office Hours **Friday 3-5pm and by appointment**
Notes and Feedback
Notes on TDD

• Main should not be “gutted” and everything put in functions; a reader of your code should be able to understand the high-level idea from main

• On the flip side, each of your functions should be “function worthy”; if a function is one line that is always called as part of another function, merge the two functions

• Parameter types and return type should be included in your comment for each function
Lab feedback

• Avoid hard-coding!

• Several cases of under or over commenting

• Commenting formula:
  • line break
  • comment on it’s own line
  • code block (2-6 lines)
  • (very short comments can be inline)
  • (indentation should match the level of the code)
Method vs. Function

• A method is called by a specific instance using “dot” notation (however `random.choice(..)` is a function because `random` is a library not an instance of a class)

• Both methods and functions can have any number of parameters (including none), and both can return a value:

  ```
  n = get_user_int()
  x = pt.getX()
  ```

• Both methods and functions can return nothing (print or mutate):

  ```
  display(board)
  lst.append(item)
  ```
Stack Diagrams (review)
Variable names

Stack

Swap
 i
 j
 1st -
 temp

shuffle
 1st -

main

num-1st

heap for values

before: [4, 5, 6, 7]
after: [7, 5, 4, 6]

index 0 1 2 3

"hi"

1 2 3 4 5 6
List-of-Lists (LOLs)
$$\text{list} = \begin{bmatrix} ["a", "b", "c"], & ["A", "B", "C"], \\
[0], & [1, 2] \end{bmatrix}$$